

## 2.3 Air Quality

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 2.3.1 Environmental Setting

This air quality setting section discusses federal and State ambient air quality standards and existing air quality conditions, identifies sensitive receptors, and describes the regulatory framework for air quality management. Additional background information is contained in **Appendix A, Air Quality Analysis**, and **Appendix B, Review of West Oakland Health Impact Studies**.

#### 2.3.1.1 Existing Conditions

The Project area is located within Alameda County in the San Francisco Bay Area Air Basin (SFBAAB). It is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) at the local level, the California Air Resources Board (ARB) at the State level, and the U.S. Environmental Protection Agency (EPA) at the federal level. Refer to Section 2.3.1.2, *Regulatory Setting*.

Commonly used indicators of ambient air quality conditions are existing concentrations of the following criteria pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead, and particulate matter (PM). For particulate matter, two types are considered: less than or equal to 10 microns in diameter (PM<sub>10</sub>) and particulate matter less than or equal to 2.5 microns in diameter (PM<sub>2.5</sub>). These criteria pollutants are regulated by the EPA and ARB through national and California ambient air quality standards (NAAQS and CAAQS), respectively. The ARB and BAAQMD are responsible for ensuring these standards are met.

Ozone and NO<sub>2</sub> are considered regional pollutants because they or their precursors affect air quality on a regional scale. Nitrogen oxides (NO<sub>x</sub>) react photochemically with reactive organic gases (ROG) to form ozone. This reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO<sub>2</sub>, and lead are considered to be local pollutants that tend to accumulate in the air locally. Particulate matter is considered to be a local as well as a regional pollutant. The primary pollutants of concern in the Project area are ozone, ROG, NO<sub>x</sub>, CO, and PM. In addition, toxic air contaminants (TACs) are of concern in the Project area. Effects from TACs tend to be local rather than regional. The health effects of TACs can result from either acute or chronic exposure. Many types of cancer are associated with chronic TAC exposures. The majority of the estimated health risks from TACs can be attributed to a relatively few

compounds, the most important being particulate matter from diesel-fueled engines (“diesel particulate matter” or DPM). There are no ambient air quality standards established for TACs.

### Local Air Quality and Attainment Status

The existing air quality conditions in the Project area can be characterized by monitoring data collected in the region. The nearest monitoring station to the Project area is the Oakland-West station located at 1100 21<sup>st</sup> Street. The station is approximately 0.4 mile east of the Project area and monitors for ozone, CO, PM2.5, and NO<sub>2</sub>. There are currently no stations in Alameda County that collect data on PM10. Based on the monitoring data collected at the Oakland-West station, there were approximately 21 violations of the national PM2.5 standard, one violation each for the 8-hour state and national ozone standards, and one violation of the state 1-hour ozone standard, for the period between 2017 and 2019. Refer to **Appendix A, Table 2, Ambient Air Quality Monitoring Data for the Oakland-West Station**. (California Air Resources Board 2020a; U.S. Environmental Protection Agency 2020a)

Local air quality monitoring data are used by EPA and ARB to assess and classify the air quality status of each regional air basin, county, or, in some cases, a specific urbanized area. The air quality status is identified as *nonattainment*, *maintenance*, *attainment*, or *unclassified*. If a pollutant concentration is lower than the State or federal standard, the area is classified as being in *attainment* of the standard for that pollutant. If a pollutant violates the standard, the area is considered a *nonattainment* area. *Maintenance* status is assigned to areas where pollutant concentrations previously exceeded the standards but are currently meeting the standard over a designated period of time. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated *unclassified*. **Table 2.3-1** summarizes the attainment status of the Project area with regard to the NAAQS and CAAQS.

**Table 2.3-1. Federal and State Attainment Status of the Project Area (Alameda County)**

Pollutant	NAAQS	CAAQS
8-hour ozone	Marginal Nonattainment	Nonattainment
CO	Maintenance (P)	Attainment
PM10	Attainment	Nonattainment
PM2.5	Attainment	Nonattainment
NO <sub>2</sub>	Attainment	Attainment

Sources: California Air Resources Board 2020b; U.S. Environmental Protection Agency 2020b.

Note:

(P) = designation applies to a portion of the county

### Sensitive Receptors

The BAAQMD generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants. This includes children, the elderly, and people with illnesses. Examples of sensitive receptors include residences, schools, medical facilities, daycare centers, parks, and playgrounds.

One of the closest sensitive receptors in the vicinity of the Project area is the residential live/work space located on Peralta Street, between 18<sup>th</sup> and 20<sup>th</sup> Streets. This is approximately 320 feet south of the proposed Class II bike lanes on 20<sup>th</sup> Street and 940 feet south of the proposed Class I portion of the Link on West Grand Avenue. In addition, there are some residences in the vicinity of 17<sup>th</sup> Street, between Mandela Parkway and Willow Street. Peralta Studios, a live/work warehouse space, is located at the southwest corner of West Grand Avenue/Mandela Parkway. The nearest Mixed-Use (Residential/Commercial) land use is located northeast of the Project area at 28<sup>th</sup> Street, between Mandela Parkway and Ettie Street.

Existing recreational uses include the Bay Bridge Trail on the west end of the alignment, the bicycle/pedestrian pathway along Mandela Parkway, and Raimondi Park on south side of 20<sup>th</sup> Street, between Wood Street and Campbell Street. The Mandela Parkway median includes informal seating areas at about 100 feet east of the Class I portion of the Link on West Grand Avenue. Raimondi Park is primarily used for active recreation, such as baseball and football activities. There are no schools, medical facilities, or daycare centers within 1,000 feet of the Project area.

### Background Health Risks

Per the 2018 changes in the CEQA Guidelines related to the California Supreme Court ruling in the *CBIA vs. BAAQMD* case, the potential impacts of the existing environment on project users are not considered impacts of a project under CEQA. However, for public information purposes only, the following background information is provided concerning existing health risks in the project area.

The Project would extend through the industrial and commercial area in West Oakland. West Oakland is identified by the BAAQMD as one of the urban or industrialized communities with high levels of health risk from TACs. The major TAC of concern in the Project area is DPM emitted by truck traffic traveling on I-880 and I-80, rail yard and port-related operations, and industrial equipment. Long-term health effects associated with existing DPM in the Project area are characterized based on the review of published studies prepared by the by the ARB, University of California-Berkeley, University of California-Davis, Caltrans, and the BAAQMD. Detailed discussion of current health risk levels in the Project area and associated health risks to new Link users is included in **Appendix B**. The following studies and data sets were reviewed for the analysis:

- Diesel Particulate Matter Health Risk Assessment for the West Oakland Community (California Air Resources Board 2008)
- West Oakland Monitoring Study (Bay Area Air Quality Management District 2010)
- BAAQMD Windrose Data
- BAAQMD Cancer Risk Data

Background health risks from existing DPM sources were summarized into the overall cancer risks by location as shown by the isopleths from the ARB West Oakland Study. Refer to **Appendix B**, Figure 1, *Estimated West Oakland Community Potential Cancer Risk from All Diesel PM Emissions Sources in 2005*. The study evaluates health impacts using 2005 emissions inventories and dispersion models. The study forecasts health risks using available growth and control factors, such as future regulations, to project the same health risks in 2010, 2015, and 2020. Total cancer risk from the port operations, rail yard, and other freight activity was between 1,000 and 1,500 in a million in 2005 for the Project area. Under 2005 scenarios, the majority of DPM is from on-road trucks which contribute from 20 percent to over 60 percent of the Project area's cancer risk. As of 2017, DPM reduction at the Port compared to 2005 was approximately 80 percent (Port of Oakland 2019a).

## 2.3.1.2 Regulatory Setting

### Federal and State

The EPA and the ARB have established NAAQS and CAAQS, respectively, for six criteria pollutants: CO, NO<sub>2</sub>, SO<sub>2</sub>, ozone, lead, and PM, which consists of PM10 and PM2.5. Refer to **Appendix A, Table 1, Federal and State Ambient Air Quality Standards**, for the specific national and State standards for each criteria pollutant. Most standards have been set to protect public health. For some pollutants, standards have been based on values such as protection of crops, protection of materials, or avoidance of nuisance conditions. For certain pollutants and averaging periods, CAAQS are more stringent than NAAQS.

Applicable federal and State regulations that affect DPM emissions in the present and future are discussed in **Appendix B**. In particular, the ARB's Diesel Risk Reduction Plan (DRRP) includes the goal to reduce DPM emissions by 85 percent in 2020 from 2000 values by requiring filters and greater vehicle turnover of older more polluting highway diesel vehicles (California Air Resources Board 2000).

### Regional and Local

#### Port of Oakland

In addition to supporting ARB's DRRP, the Port of Oakland adopted the Maritime Air Quality Improvement Plan (Port of Oakland 2009) to support the implementation of the Port Maritime Air Quality Policy Statement. This established a goal of reducing the excess community cancer health risk related to exposure to DPM emissions associated with the Port's maritime operations by 85 percent from 2005 to 2020. The Plan set the following interim goals of reducing DPM emissions in 2012 and 2020:

- On- and near-shore DPM emissions were to be reduced by 65 percent by 2012 and 85 percent by 2020 from 2005 values.
- Off-shore DPM emissions were to only to increase by 2 percent by 2012 and were to be reduced by 85 percent by 2020 from 2005 values.

As of 2017, DPM emissions at the Port had been reduced by 80 percent relative to 2005 (Port of Oakland 2019a)

In June 2019, the Port completed the Seaport Air Quality 2020 and Beyond Plan, which outlines strategies for the Port to minimize criteria air pollutant, DPM, and greenhouse gas (GHG) emissions (Port of Oakland 2019b).

#### Bay Area Air Quality Management District

At the local level, the BAAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and State air quality laws. This is for ensuring that NAAQS and CAAQS are not violated within the SFBAAB, and for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. The Project may be subject to the following BAAQMD rules and regulations at the time of construction.

- **Regulation 2, Rule 2 (New Source Review)**. This regulation contains requirements for Best Available Control Technology and emission offsets.
- **Regulation 2, Rule 5 (New Source Review of Toxic Air Contaminates)**. This regulation outlines guidance for evaluating TAC emissions and their potential health risks.

- **Regulation 6, Rule 1 (Particulate Matter).** This regulation restricts emissions of PM darker than No. 1 on the Ringlemann Chart to less than three minutes in any one hour.
- **Regulation 7 (Odorous Substances).** This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- **Regulation 8, Rule 3 (Architectural Coatings).** This regulation limits the quantity of Volatile Organic Compounds (VOCs) in architectural coatings.
- **Regulation 9, Rule 6 (Nitrogen oxides emission from natural gas-fired boilers and water heaters).** This regulation limits emissions of NO<sub>x</sub> generated by natural gas-fired boilers.
- **Regulation 9, Rule 8 (Stationary Internal Combustion Engines).** This regulation limits emissions of NO<sub>x</sub> and CO from stationary internal combustion engines of more than 50 horsepower.
- **Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing).** This regulation controls emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establishes appropriate waste disposal procedures.

As part of its responsibility, the BAAQMD developed CEQA Guidelines that include analysis requirements for construction- and operational-related emissions and thresholds of significance for ROG, NO<sub>x</sub>, CO, PM<sub>2.5</sub>, PM<sub>10</sub>, TACs, and odors.

As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the Appendix G checklist determinations. Accordingly, the BAAQMD’s thresholds, as summarized in **Table 2.3-2**, are used to evaluate the significance of air quality impacts associated with the Project.

**Table 2.3-2. BAAQMD Thresholds of Significance**

<b>Pollutant</b>	<b>Construction</b>	<b>Operations</b>
ROG	54 lbs/day	54 lbs/day or 10 tons/year
NO <sub>x</sub>	54 lbs/day	54 lbs/day or 10 tons/year
CO	–	Violation of CAAQS
PM <sub>10</sub> (exhaust)	82 lbs/day	82 lbs/day or 15 tons/year
PM <sub>2.5</sub> (exhaust)	54 lbs/day	54 lbs/day or 10 tons/year
PM <sub>10</sub> /PM <sub>2.5</sub> (dust)	BMPs	–
TACs (Project-level)	Increased cancer risk of 10 in 1 million; increased non-cancer risk of greater than 1.0 (hazard index [HI]); PM <sub>2.5</sub> increase of greater than 0.3 micrograms per cubic meter	Same as construction
TACs (cumulative)	Increased cancer risk of 100 in 1 million; increased non-cancer risk of greater than 10.0; PM <sub>2.5</sub> increase of greater than 0.8 microgram per cubic meter at receptors within 1,000 feet	Same as construction
Odors	–	Five complaints per year averaged over 3 years

Source: Bay Area Air Quality Management District 2017.

### City of Oakland General Plan Open Space, Conservation and Recreation Element

The City of Oakland OSCAR (City of Oakland 1996) includes the following policy relevant to emissions.

- **Policy CO-12.6: Control of Dust Emissions.** Require construction, demolition and grading practices which minimize dust emissions.

### City of Oakland Standard Conditions of Approval

As stated in Section 1.7.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. Several conditions in the SCA are not applicable to the Project because they pertain to projects that are land use developments (e.g., residential or commercial developments), involve a stationary source of pollutants, involve a loading dock or truck fleet, or are located in areas with naturally occurring asbestos. The air quality-related SCA include the following conditions of approval that are applicable to the Project:

20. Dust Controls – Construction Related (this condition applies to all projects involving construction activities)

The Project applicant shall implement all of the following applicable dust control measures during construction of the Project:

- Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including tires, shall be washed off prior to leaving the site.
- Site access points to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

Measures h) through l) apply to projects that involve (1) extensive site preparation (i.e., the construction is four acres or more in size) or (2) extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export). The Project would not meet either of these conditions; therefore, measures h) through l) would not be required.

21. Criteria Air Pollutant Controls - Construction Related (this condition applies to all projects involving construction activities)

The Project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the Project as applicable:

- a) Idling times on all diesel-fueled commercial vehicles over 10,000 pounds shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations [CCR]). Clear signage to this effect shall be provided for construction workers at all access points.
  - b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes, and fleet operators must develop a written policy as required by Title 23, Section 2449, of the CCR (“California Air Resources Board Off-Road Diesel Regulations”).
  - c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the BAAQMD as needed.
  - d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall be used only if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.
  - e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.
  - f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the CCR (California Air Resources Board Off-Road Diesel Regulations), and upon request by the City (and BAAQMD if specifically requested), the Project applicant shall provide written documentation that fleet requirements have been met.
26. Asbestos in Structures (this condition applies to all projects involving either of the following: [1] demolition of structures or [2] renovation of structures known to contain or may contain asbestos).

The Project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials, including, but not limited to, CCR Title 8; California Business and Professions Code, Division 3; California Health and Safety Code Sections 25915–25919.7; and BAAQMD, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

## 2.3.2 Discussion of Potential Impacts

### a. The Project would have a less-than-significant impact on implementation of the applicable air quality plan.

Alameda County is currently designated a nonattainment area for the federal 8-hour ozone standards, as well as maintenance area for the federal CO standard (**Table 2.3-1**). The most recent BAAQMD air quality plan is the *2017 Clean Air Plan*, which provides an integrated strategy to control ozone, PM, TACs, and GHG emissions. The primary goals of the *2017 Clean Air Plan* are to (1) reduce emissions and decrease concentrations of harmful pollutants, (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and (3) reduce GHG emissions and protect the climate.

To meet the primary goals, the *2017 Clean Air Plan* recommends specific control measures and actions. These control measures are grouped into various categories and include stationary-source measures, mobile-source measures, and transportation control measures. The *2017 Clean Air Plan* recognizes that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the *2017 Clean Air Plan* includes control measures that are aimed at reducing air pollution in the SFBAAB.

The Project consists of construction of bicycle and pedestrian facilities, including a parking lot for bicyclists and pedestrians to park their cars. Because the Project would not add any additional capacity to existing roadways in the Project area, it is exempt from federal transportation conformity requirements per 40 Code of Federal Regulations (CFR) 93.126. In addition, the Project would not conflict with any applicable land use plan or contribute to regional employment or population growth. As noted in Chapter 1, *Proposed Project*, the purpose of the Project is to provide a safe connection for bicyclists and pedestrians to travel between West Oakland and the Bay Bridge Trail. Thus, the purpose of the Project directly supports the following measure from the *2017 Clean Air Plan*:

- TR9: Bicycle and Pedestrian Access and Facilities – Encourage planning for bicycle and pedestrian facilities in local plans (e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities).

The Project would result in additional bicycle infrastructure and thus encourage bicycle and pedestrian transportation, which facilitates the overall goals of the *2017 Clean Air Plan*. The Project would temporarily generate emissions during construction from construction vehicles, equipment and dust. Once constructed and operational, the Project would generate a minor amount of emissions associated with vehicles traveling to the Project area to use the new Link. Emissions from construction and operation would be well below BAAQMD thresholds of significance, discussed below. These emissions are not expected to impede attainment or maintenance of the NAAQS or CAAQS. Accordingly, the Project would not conflict with or obstruct implementation of air quality plans because the purpose of the Project supports measure TR9. This impact would be less than significant.

- b. During construction, the Project would have a less-than-significant impact with mitigation on air quality standards. During Project operation, the Project would have a less-than-significant impact on air quality standards.**

### **Construction**

Construction activities associated with the Project would generate short-term emissions of ROG, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Emissions would originate from on-road hauling trips, construction worker commute trips, construction site fugitive dust, and off-road construction equipment. Construction-related emissions would vary substantially, depending on the level of activity on a particular day, specific construction activities, and wind and precipitation conditions.

The California Emission Estimator Model (CalEEMod) was used to estimate construction emissions. The estimate is based on the Project-specific inputs of construction phases and schedule, duration, equipment, demolition and earthmoving volume, and truck and worker trips associated with each phase. Construction data, including phases, schedule, construction equipment, and off-haul debris, were provided by the Project's engineering consultant. The construction assumptions and CalEEMod inputs and outputs are provided in **Appendix A**, Attachment 1. Construction equipment defaults from the CalEEMod, such as emission factors, horsepower, and load factors, were used for the analysis. It is assumed that onsite construction equipment and construction activities would occur five days per week and eight hours per

day. The default vehicle trip lengths, for hauling trucks and workers, from the CalEEMod were also used for the analysis.

The construction emissions analysis was originally conducted in 2014, using the current version of CalEEMod at that time (version 2013.2.2). Although there have been subsequent updates to CalEEMod since 2014, the emissions presented in this analysis are considered to be a reasonable worst-case estimate for multiple reasons. The 2014 emissions analysis did not assume that the Project would be constructed with phasing options; however, the current definition of the Project indicates that it would be constructed with phasing options. Overall, the phasing options would result in a lower intensity of construction activity and lower emissions compared with emissions from the full Project because construction of the Project between Frontage Road and Mandela Parkway would occur later than the rest of the Project. In addition, the 2014 emissions analysis assumed construction would occur from 2017 through 2019. Because Project construction would start and end approximately five or six years later, the construction equipment would be cleaner because older, more polluting equipment would be replaced by newer, cleaner equipment. The portion of the Project from Frontage Road to Mandela Parkway would be constructed at an even later date, whenever funding is available, and with newer, cleaner construction equipment. Thus, because construction activity would occur later and with cleaner equipment, the emissions modeled with an older version of CalEEMod remains a reasonable worst-case scenario.

**Table 2.3-3** summarizes the maximum daily emissions for the Project. Project construction is estimated to occur for approximately two years but within three calendar years. The emissions in the table below indicate that construction emissions would not exceed the BAAQMD thresholds. The BAAQMD considers fugitive dust impacts to be less than significant through the application of BMPs. In addition, the BAAQMD recommends construction contractors implement all basic construction mitigation measures, as listed in their 2017 CEQA Guidelines, to reduce construction emissions from dust and diesel exhaust. Further, these measures are also required per the Oakland SCAs. Therefore, implementation of **Mitigation Measure AQ-1** (Implement BAAQMD Basic Control Measures to Control Construction-Related Dust and Reduce Exhaust Emissions during Construction) is required to ensure the construction emissions impact is less than significant.

**Table 2.3-3. Summary of Construction Criteria Pollutant Emissions**

Daily/Annual Emissions	ROG	NO <sub>x</sub>	CO	PM10			PM2.5		
				Dust	Exhaust	Total	Dust	Exhaust	Total
<b>Year 1</b>									
Maximum Daily Emissions (lbs/day)	2.53	19.49	18.85	2.06	1.07	2.71	0.41	1.04	1.36
<b>Year 2</b>									
Maximum Daily Emissions (lbs/day)	1.62	13.59	13.69	1.73	0.65	2.08	0.32	0.61	0.93
<b>Year 3</b>									
Maximum Daily Emissions (lbs/day)	0.59	5.03	6.17	0.40	0.26	0.67	0.11	0.24	0.35
BAAQMD Thresholds (lbs/day)	54	54	-	BMPs	82	-	BMPs	54	-

See **Appendix A**, Attachment 1 for construction assumptions and CalEEMod inputs and outputs.

**Operation**

Long-term Project air quality impacts are limited to those associated with new vehicle trips resulting from individuals driving to the Project area to park and utilize the new Path. Long-term Project operation would require the use of electricity for proposed lighting along the Path and at the Wood Street parking lot.

Some of the people using the new Path would drive to and from the new Wood Street parking lot, which would generate new vehicle trips. Based on the trip generation estimated by the Project’s transportation consultant (**Appendix C, Transportation Impact Analysis**), the Project could generate approximately 400 daily trips on weekdays and 1,500 daily trips on weekends.

The CalEEMod was used to estimate criteria pollutant emissions from these vehicle trips. The operational assumptions and CalEEMod inputs and outputs are provided in **Appendix A, Attachment 1**. The default vehicle trip lengths and vehicle trip types from the CalEEMod for the “City Park” land use were also used for the analysis. Similar to the construction analysis discussed above for *Construction*, the operational emissions analysis was originally conducted in 2014, using the current version of CalEEMod at that time (version 2013.2.2). Although there have been subsequent updates to CalEEMod since 2014, the emissions presented in this analysis are considered to be a reasonable worst-case estimate.

The 2014 analysis assumed that the Project would become operational in 2019; the actual operational year would be several years later, with the parking lot not anticipated to be constructed for ten or more years due to funding constraints. Consequently, the 2014 operational emissions analysis represents a worst-case scenario because vehicle emissions in 2019 would be higher on a per-mile basis than in subsequent years. The vehicle fleet generally becomes less polluting over time because of advancements in vehicle technology and the retirement of older, more polluting vehicles. Because the Project would become operational subsequent to 2019, operational emissions are anticipated to be less than what is shown in this analysis.

**Table 2.3-4** summarizes the estimated maximum daily emissions during weekends and the annual emissions during operation of the Project. Project implementation would result in a minor net increase in vehicle trips, vehicle miles traveled, and associated operational emissions. These increases are anticipated to be fairly minimal and are well below the BAAQMD thresholds. Therefore, the impact would be less than significant.

**Table 2.3-4. Summary of Operational Criteria Pollutant Emissions**

Daily/Annual Emissions	ROG	NO <sub>x</sub>	CO	PM10	PM2.5
Maximum Daily Emissions (lbs/day)	7.74	19.71	71.96	11.68	3.32
Annual Emissions (tons/year)	0.61	1.68	6.39	0.91	0.26
BAAQMD Thresholds (lbs/day)	54	54	CAAQS	82	54
BAAQMD Thresholds (tons/year)	10	10	CAAQS	15	10

Notes:

CAAQS = violation of a CAAQS

See **Appendix A, Attachment 1** for operation assumptions and CalEEMod inputs and outputs.

- c. **The Project would have a less-than-significant impact on exposure of sensitive receptors to substantial pollutant concentrations.**

**Diesel Particulate Matter**

**Construction**

Project construction would generate DPM from operation of diesel-fueled equipment. This would result in the exposure of nearby existing sensitive receptors, including residences and Raimondi Park users, to DPM concentrations. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. In addition, DPM

concentrations, and thus cancer health risks, dissipate as a function of distance from their source. BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk.

As discussed above, existing sensitive receptors (residences and Raimondi Park) are located within 1,000 feet of the eastern portion of Project area. Although DPM generated during construction may expose these receptors to increased health risks, construction activities would occur in one section at a time proceeding along its linear alignment, resulting in relatively brief exposure for sensitive receptors within 1,000 feet. This is significantly lower than the 70-year exposure period typically associated with chronic cancer health risks. In addition, the construction of the at-grade portions of the bike path and bike lanes would require minimal construction equipment. Therefore, construction related DPM emissions generated within the immediate construction area are expected to be low and dissipate as construction work moves farther away these receptors. Moreover, implementation of **Mitigation Measure AQ-1** would further reduce DPM emissions. Therefore, construction of the Project is not expected to exceed the BAAQMD risk thresholds and, thus, would not expose sensitive populations to substantial pollutant concentrations. This impact is considered less than significant.

### ***Operation***

Implementation of the Project would not generate appreciable DPM emissions. However, users of the new Link would be exposed to existing concentrations of DPM emitted by truck traffic traveling on the adjacent roadways (e.g., I-880, I-80, Maritime Street), rail yard and port-related operations, and industrial equipment in the Project vicinity. The California Supreme Court has opined that impacts of the environment on projects are not subject to CEQA analysis, with limited exceptions. Consequently, the operational DPM-related impacts affecting future Link users from existing land uses (i.e., roadways, rail and port uses) do not need to be evaluated under CEQA.

### **Carbon Monoxide**

The BAAQMD establishes screening criteria to determine whether a project would result in CO emissions that exceed the CAAQS. Based on the screening criteria, the Project would result in a less-than-significant impact for localized CO concentrations. This assumes the Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not conflict with an applicable congestion management program (Bay Area Air Quality Management District 2017). As noted above, the Project would generate an estimated 400 daily trips on weekdays and 1,500 daily trips on weekends. The highest vehicle trip volumes would be at the Wood Street parking lot driveway (50 weekday PM peak hour and 150 Saturday peak hour) and at the West Grand Avenue/Campbell Street intersection (26 weekday PM peak hour and 79 Saturday peak hour). Refer to **Appendix C**, Table 6 and Figure 9. Given that the Project-related increases in traffic volumes at affected intersections would be minor, it is unlikely that the BAAQMD's screening criteria of 44,000 vehicles per hour would be exceeded by the Project or the Project would conflict with an applicable congestion management program. Accordingly, the Project would not contribute to or worsen localized CO concentrations from increased traffic or congestion associated with the Project. This impact would be less than significant.

### ***Naturally Occurring Asbestos***

Depending on a Project's size and geographic location, BAAQMD may require mitigation to address potential impacts from naturally occurring asbestos (NOA). BAAQMD enforces ARB's applicable air toxic control measures (ATCM). This requires the best available dust mitigation measures to reduce and control dust emissions for operations engaged in road construction and maintenance, grading, and quarrying and surface mining activities in areas where NOA is likely to be found.

The Project is not located in an area known to contain NOA. Accordingly, there is no potential for impacts related to NOA emissions during construction activities. This impact would be less than significant.

**d. The Project would have a less-than-significant impact resulting from objectionable odors affecting a substantial number of people.**

While offensive odors rarely cause any physical harm, they can be unpleasant. This can lead to considerable distress among the public and often generate citizen complaints to local governments and air districts. Potential odor emitters during construction include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. However, construction-related operations would be temporary and would not be likely to result in nuisance odors that would violate BAAQMD's Regulation 7. Link users could be exposed to odors from the EBMUD wastewater treatment plant to the north, but, as noted above, the California Supreme Court has opined that impacts of the environment on projects are not subject to CEQA analysis, with limited exceptions. Consequently, the odor impacts affecting future Link users from existing land uses (i.e., the wastewater treatment plant) do not need to be evaluated under CEQA. This impact is therefore considered less than significant.

### 2.3.3 Mitigation Measures

#### **Mitigation Measure AQ-1: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust and Reduce Exhaust Emissions during Construction**

In accordance with the BAAQMD's CEQA Guidelines (2017) and the City of Oakland's Standard Conditions of Approval, BATA/Caltrans will ensure their construction contractor implements the following BASIC construction-related air pollution control measures at all construction sites to reduce particulate matter emissions from construction activities.

- a. Water all exposed surfaces of active construction areas (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) at least twice daily (using reclaimed water if possible). Watering will be sufficient to prevent airborne dust from leaving the site, and the frequency will be increased as necessary when wind speeds exceed 15 miles per hour.
- b. Cover all haul trucks transporting soil, sand, or other loose material offsite.
- c. Remove all visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d. Pave all roadways, driveways, and sidewalks as soon as feasible. In addition, any building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- e. Enclose, cover, water twice daily or apply non-toxic soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f. Limit vehicle speeds on unpaved roads to 15 miles per hour
- g. Minimize idling times by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the CCR). Provide clear signage to this effect for construction workers at all access points.
- h. Maintain and properly tune all construction equipment in accordance with the manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be in proper condition prior to operation.

- i. Post a publicly visible sign with the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor will respond and take corrective action within 48 hours. The names and telephone numbers for contact persons at BATA, Caltrans and the Bay Area Air Quality Management District will also be visible to ensure compliance with applicable regulations.
- j. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.
- k. All trucks and equipment, including tires, shall be washed off prior to leaving the site.
- l. Site access points to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

**Mitigation Measure AQ-2: Prepare a Health Risk Assessment prior to Construction near the Wood Street Residences and Implement Risk Reduction Measures (as necessary)<sup>3</sup>**

- a. The project sponsor shall prepare a site-specific construction HRA for all construction activity within 1,000 feet of the 2011–2195 Wood Street project once the construction schedule for such activity is known. This HRA shall be prepared well in advance of construction so that if provision of filtration, as discussed below, can be installed prior to construction in the vicinity.
- b. For the 2011–2195 Wood Street project, the project sponsor shall determine the specific measures or features that were approved for the Wood Street project, pursuant to the City's conditions of approval to reduce exposure to existing sources of TACs. Indoor air filtration at the Wood Street project is expected to be equal to MERV-13 or greater efficiency standards, based on the requirements of the West Oakland Community Action Plan. The project sponsor shall also confirm other measures at this building that will be implemented, such as strategic site layout planning, and indoor air quality monitoring unit.
- c. If the project's construction HRA demonstrates that health risk exposures or PM<sub>2.5</sub> concentrations at adjacent receptors would be less than BAAQMD thresholds, then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks or PM<sub>2.5</sub> concentrations would exceed BAAQMD thresholds, inclusive of the Wood Street project's conditions of approval, then additional mitigation shall be provided by the applicant to reduce risks so that the project's incremental risk is below BAAQMD project thresholds and the project does not contribute to an exceedance of the BAAQMD cumulative threshold. The additional mitigation will include source reductions, such as mandating Tier 4 engines in construction equipment, and/or receptor reductions, such as higher air filtration efficiency standards than those approved for the Wood Street project (e.g., MERV 14 or higher). The use of filtration with higher MERV values, such as MERV-14, would result in additional filtering of particles beyond MERV-13, with up to 84 percent efficiency for MERV-14 for particles less than 1 micron in size.<sup>4</sup>

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<sup>3</sup> Mitigation Measure AQ-2 is to address cumulative impacts (see discussion below in Section 2.21.1). This mitigation is referred to as Mitigation Measure AQ-4 in the 2020 Air Quality Technical Errata.

<sup>4</sup> Based on estimates from the U.S. Environmental Protection Agency (<https://www.epa.gov/indoor-air-quality-iaq/what-merv-rating-1>).